

**Number $a(n)$ of n -element T_0 -antichains on a labeled set,
 $n=0,1,\dots,10$:**

(An antichain on a set is a T_0 antichain if for every two distinct points of the set there exists a member of the antichain containing one but not the other point)

$$([n!*e] = \text{floor}(n!*e))$$

$$a(0) = (1/0!)*[1!*e] = 2$$

$$a(1) = (1/1!)*[2!*e] = 5$$

$$a(2) = (1/2!)*([4!*e]-2*[3!*e]+[2!*e]) = 19$$

$$a(3) = (1/3!)*([8!*e]-6*[6!*e]+6*[5!*e]+3*[4!*e]-6*[3!*e]+2*[2!*e]) = 16654$$

$$a(4) = (1/4!)*([16!*e]-12*[12!*e]+24*[10!*e]+4*[9!*e]-18*[8!*e]+6*[7!*e]-36*[6!*e]+36*[5!*e]+11*[4!*e]-22*[3!*e]+6*[2!*e]) = 2369110564675$$

$$a(5) = (1/5!)*([32!*e]-20*[24!*e]+60*[20!*e]+20*[18!*e]+10*[17!*e]-110*[16!*e]-120*[15!*e]+150*[14!*e]+120*[13!*e]-240*[12!*e]+20*[11!*e]+240*[10!*e]+40*[9!*e]-205*[8!*e]+60*[7!*e]-210*[6!*e]+210*[5!*e]+50*[4!*e]-100*[3!*e]+24*[2!*e]) = 5960531437586238714806902334250676$$

$$a(6) = (1/6!)*([64!*e]-30*[48!*e]+120*[40!*e]+60*[36!*e]+60*[34!*e]-12*[33!*e]-345*[32!*e]-720*[30!*e]+810*[28!*e]+120*[27!*e]+480*[26!*e]+360*[25!*e]-480*[24!*e]-720*[23!*e]-240*[22!*e]-540*[21!*e]+1380*[20!*e]+750*[19!*e]+60*[18!*e]-210*[17!*e]-1535*[16!*e]-1820*[15!*e]+2250*[14!*e]+1800*[13!*e]-2820*[12!*e]+300*[11!*e]+2040*[10!*e]+340*[9!*e]-1815*[8!*e]+510*[7!*e]-1350*[6!*e]+1350*[5!*e]+274*[4!*e]-548*[3!*e]+120*[2!*e]) = 479047836152505670895481840783987408043359908583921478726185296900312296071642855730299$$

$$\begin{aligned}
a(7) &= (1/7!) * ([128!*e] - 42*[96!*e] + 210*[80!*e] + 140*[72!*e] + 210*[68!*e] - \\
&84*[66!*e] + 14*[65!*e] - 819*[64!*e] - \\
&2520*[60!*e] + 2730*[56!*e] + 840*[54!*e] + 840*[52!*e] - \\
&420*[51!*e] + 2940*[50!*e] + 630*[48!*e] - 5040*[46!*e] + 840*[45!*e] - \\
&1260*[44!*e] + 1680*[43!*e] - 9660*[42!*e] + 1260*[41!*e] + 3360*[40!*e] - \\
&7560*[39!*e] + 11130*[38!*e] + 5880*[37!*e] + 9240*[36!*e] + 2982*[35!*e] - \\
&6300*[34!*e] - 8652*[33!*e] - 9905*[32!*e] - 8400*[31!*e] - \\
&8540*[30!*e] + 13860*[29!*e] + 14490*[28!*e] - \\
&5040*[27!*e] + 10500*[26!*e] + 10080*[25!*e] - 8120*[24!*e] - 15050*[23!*e] - \\
&5040*[22!*e] - 11340*[21!*e] + 20580*[20!*e] + 15750*[19!*e] - 1540*[18!*e] - \\
&5810*[17!*e] - 16485*[16!*e] - 21420*[15!*e] + 26250*[14!*e] + 21000*[13!*e] - \\
&29820*[12!*e] + 3500*[11!*e] + 17640*[10!*e] + 2940*[9!*e] - \\
&16016*[8!*e] + 4410*[7!*e] - 9744*[6!*e] + 9744*[5!*e] + 1764*[4!*e] - \\
&3528*[3!*e] + 720*[2!*e]) = \\
&= 2079811805332964509282828374941210967059134243298913629917535146183474381553 \\
&37007979750764101158194455464425646080237710820716478133879891572933721976174 \\
&853382352353735345397385298354453922397967775490285318192062
\end{aligned}$$

$$\begin{aligned}
a(8) &= (1/8!) * ([256!*e] - 56*[192!*e] + 336*[160!*e] + 280*[144!*e] + 560*[136!*e] - \\
&336*[132!*e] + 112*[130!*e] - 16*[129!*e] - 1652*[128!*e] - \\
&6720*[120!*e] + 7140*[112!*e] + 3360*[108!*e] - \\
&3360*[102!*e] + 13440*[100!*e] + 672*[99!*e] - 672*[98!*e] + 7224*[96!*e] - \\
&20160*[92!*e] + 6720*[90!*e] - 2240*[88!*e] + 13440*[86!*e] + 3360*[85!*e] - \\
&63840*[84!*e] - 3360*[83!*e] + 11760*[82!*e] - 2800*[81!*e] - 1960*[80!*e] - \\
&47040*[78!*e] - 6720*[77!*e] + 61320*[76!*e] - \\
&13440*[75!*e] + 44800*[74!*e] + 5040*[73!*e] + 77840*[72!*e] - \\
&6720*[71!*e] + 52416*[70!*e] + 28560*[69!*e] - 51912*[68!*e] + 56*[67!*e] - \\
&99792*[66!*e] + 30632*[65!*e] - 38318*[64!*e] + 21840*[63!*e] - \\
&80640*[62!*e] + 6720*[61!*e] - 128240*[60!*e] - 40320*[59!*e] + 57120*[58!*e] - \\
&55440*[57!*e] + 190680*[56!*e] + 30240*[55!*e] + 105840*[54!*e] - \\
&6720*[53!*e] + 50400*[52!*e] - 42000*[51!*e] + 21840*[50!*e] + 44940*[49!*e] - \\
&38220*[48!*e] - 28560*[47!*e] - \\
&194320*[46!*e] + 4480*[45!*e] + 15120*[44!*e] + 151200*[43!*e] - \\
&283920*[42!*e] + 52080*[41!*e] + 46200*[40!*e] - \\
&285712*[39!*e] + 299320*[38!*e] + 220080*[37!*e] + 252840*[36!*e] + 65016*[35!*e] - \\
&195720*[34!*e] - 234024*[33!*e] - 185640*[32!*e] - 235130*[31!*e] - \\
&47600*[30!*e] + 388080*[29!*e] + 190260*[28!*e] - \\
&173040*[27!*e] + 166320*[26!*e] + 186480*[25!*e] - 120680*[24!*e] - 229880*[23!*e] - \\
&77280*[22!*e] - 173880*[21!*e] + 272160*[20!*e] + 241500*[19!*e] - 38080*[18!*e] - \\
&96320*[17!*e] - 170471*[16!*e] - 241640*[15!*e] + 294000*[14!*e] + 235200*[13!*e] - \\
&316428*[12!*e] + 39200*[11!*e] + 162456*[10!*e] + 27076*[9!*e] - \\
&149324*[8!*e] + 40614*[7!*e] - 78792*[6!*e] + 78792*[5!*e] + 13068*[4!*e] - \\
&26136*[3!*e] + 5040*[2!*e]) = \\
&= 578321049316372226967679587310468896347183094782341648135828612542453821030 \\
&14196073590765031511090025980948785387261614453689015730424361226532399292182 \\
&60989906017295090028452249806756485208443811281542014932229853645428619911491 \\
&66659233363079259507726093734500118221515608643229126684913534763416364857312 \\
&22782440929658353010516085908718158250363073231531098685311570000476951995113 \\
&06180081182719758876916245278788497375248595267850308688732727609670302343591 \\
&5741514609464836254255569330926981038742910
\end{aligned}$$

$$\begin{aligned}
a(9) = & (1/9!) * ([512!*e] - 72*[384!*e] + 504*[320!*e] + 504*[288!*e] + 1260*[272!*e] - \\
& 1008*[264!*e] + 504*[260!*e] - 144*[258!*e] + 18*[257!*e] - 2988*[256!*e] - \\
& 15120*[240!*e] + 15876*[224!*e] + 10080*[216!*e] - 5040*[208!*e] - \\
& 15120*[204!*e] + 45360*[200!*e] + 6048*[198!*e] - 6048*[196!*e] - \\
& 1008*[195!*e] + 1008*[194!*e] + 28224*[192!*e] - \\
& 60480*[184!*e] + 30240*[180!*e] + 2520*[176!*e] + 60480*[172!*e] + 30240*[170!*e] - \\
& 272160*[168!*e] - 30240*[166!*e] - 6048*[165!*e] + 63504*[164!*e] + 6048*[163!*e] - \\
& 28224*[162!*e] - 48384*[160!*e] - 151200*[156!*e] - \\
& 60480*[154!*e] + 5040*[153!*e] + 219240*[152!*e] - \\
& 151200*[150!*e] + 15120*[149!*e] + 206640*[148!*e] - \\
& 15120*[147!*e] + 50400*[146!*e] + 10080*[145!*e] + 367920*[144!*e] - 60480*[142!*e] - \\
& 30240*[141!*e] + 364392*[140!*e] + 20160*[139!*e] + 252000*[138!*e] + 15120*[137!*e] - \\
& 288288*[136!*e] + 45360*[135!*e] + 33768*[134!*e] + 33264*[133!*e] - \\
& 678384*[132!*e] + 72*[131!*e] + 15232*[130!*e] - 121536*[129!*e] - \\
& 29694*[128!*e] + 438480*[126!*e] + 60480*[125!*e] - 423360*[124!*e] - \\
& 90720*[123!*e] + 120960*[122!*e] + 60480*[121!*e] - 848400*[120!*e] + 7560*[119!*e] - \\
& 302400*[118!*e] + 166320*[117!*e] + 189000*[116!*e] - 362880*[115!*e] - \\
& 1073520*[114!*e] + 60480*[113!*e] + 1134000*[112!*e] - \\
& 423360*[111!*e] + 332640*[110!*e] + 181440*[109!*e] + 952560*[108!*e] + 90720*[107!*e] \\
&] + 241920*[106!*e] - 214704*[105!*e] - 30240*[104!*e] - \\
& 54432*[103!*e] + 390096*[102!*e] - 60480*[101!*e] - \\
& 423360*[100!*e] + 578592*[99!*e] + 1302588*[98!*e] + 292320*[97!*e] - \\
& 123732*[96!*e] + 1285200*[95!*e] - 1466640*[94!*e] + 650160*[93!*e] - \\
& 766080*[92!*e] + 211680*[91!*e] - 2227680*[90!*e] + 30240*[89!*e] - 1758960*[88!*e] - \\
& 3024000*[87!*e] + 2215080*[86!*e] - 1199520*[85!*e] - 514080*[84!*e] - \\
& 841680*[83!*e] + 4445280*[82!*e] + 594720*[81!*e] + 588420*[80!*e] + 1542240*[79!*e] - \\
& 3110688*[78!*e] + 1179360*[77!*e] - \\
& 534240*[76!*e] + 1517040*[75!*e] + 1890504*[74!*e] - \\
& 1678320*[73!*e] + 375816*[72!*e] - 1511832*[71!*e] + 783216*[70!*e] - \\
& 398160*[69!*e] + 841428*[68!*e] + 2270016*[67!*e] - \\
& 1814904*[66!*e] + 2252964*[65!*e] - 403704*[64!*e] - 1406160*[63!*e] - \\
& 4605930*[62!*e] - 1370880*[61!*e] - 2817360*[60!*e] - \\
& 589680*[59!*e] + 2328480*[58!*e] - \\
& 1118880*[57!*e] + 5935860*[56!*e] + 80640*[55!*e] + 2923200*[54!*e] + 211680*[53!*e] + \\
& 1638000*[52!*e] - 1438920*[51!*e] - 614880*[50!*e] + 1648080*[49!*e] - \\
& 1751400*[48!*e] - 1027908*[47!*e] - 4667040*[46!*e] - \\
& 226800*[45!*e] + 1126440*[44!*e] + 4667040*[43!*e] - \\
& 5758200*[42!*e] + 1292760*[41!*e] + 428400*[40!*e] - \\
& 6792912*[39!*e] + 5633460*[38!*e] + 5206320*[37!*e] + 4992120*[36!*e] + 962892*[35!*e] \\
&] - 3976560*[34!*e] - 4459392*[33!*e] - 3026751*[32!*e] - \\
& 4583880*[31!*e] + 326760*[30!*e] + 7567560*[29!*e] + 2298240*[28!*e] - \\
& 3583440*[27!*e] + 2406600*[26!*e] + 3008880*[25!*e] - 1724100*[24!*e] - \\
& 3227700*[23!*e] - 1088640*[22!*e] - \\
& 2449440*[21!*e] + 3524220*[20!*e] + 3402000*[19!*e] - 639660*[18!*e] - \\
& 1408470*[17!*e] - 1810116*[16!*e] - \\
& 2784600*[15!*e] + 3367350*[14!*e] + 2693880*[13!*e] - \\
& 3501288*[12!*e] + 448980*[11!*e] + 1614816*[10!*e] + 269136*[9!*e] - \\
& 1496692*[8!*e] + 403704*[7!*e] - 708744*[6!*e] + 708744*[5!*e] + 109584*[4!*e] - \\
& 219168*[3!*e] + 40320*[2!*e])
\end{aligned}$$

$a(10) = (1/10!) * ([1024!*e] - 90*[768!*e] + 720*[640!*e] + 840*[576!*e] + 2520*[544!*e] - 2520*[528!*e] + 1680*[520!*e] - 720*[516!*e] + 180*[514!*e] - 20*[513!*e] - 4995*[512!*e] - 30240*[480!*e] + 31500*[448!*e] + 25200*[432!*e] - 20160*[416!*e] - 50400*[408!*e] + 126000*[400!*e] + 30240*[396!*e] - 30240*[392!*e] - 10080*[390!*e] + 10080*[388!*e] + 1440*[387!*e] - 1440*[386!*e] + 79920*[384!*e] - 151200*[368!*e] + 100800*[360!*e] + 30240*[352!*e] + 201600*[344!*e] + 151200*[340!*e] - 894600*[336!*e] - 151200*[332!*e] - 60480*[330!*e] + 257040*[328!*e] + 60480*[326!*e] + 10080*[325!*e] - 161280*[324!*e] - 10080*[323!*e] + 5040*[322!*e] - 229320*[320!*e] - 302400*[312!*e] - 302400*[308!*e] + 50400*[306!*e] + 611100*[304!*e] - 907200*[300!*e] + 151200*[298!*e] - 10080*[297!*e] + 745920*[296!*e] - 90720*[294!*e] - 30240*[293!*e] + 246960*[292!*e] + 30240*[291!*e] + 90720*[290!*e] + 12600*[289!*e] + 1276380*[288!*e] - 302400*[284!*e] - 302400*[282!*e] - 50400*[281!*e] + 1643040*[280!*e] + 201600*[278!*e] + 75600*[277!*e] + 1234800*[276!*e] - 50400*[275!*e] + 163800*[274!*e] + 50400*[273!*e] - 1258740*[272!*e] + 453600*[270!*e] - 100800*[269!*e] + 335160*[268!*e] + 50400*[267!*e] + 322560*[266!*e] + 37800*[265!*e] - 3270960*[264!*e] - 30240*[263!*e] - 54720*[262!*e] - 55440*[261!*e] + 232920*[260!*e] + 90*[259!*e] - 1216080*[258!*e] + 810*[257!*e] + 507390*[256!*e] - 302400*[255!*e] + 3553200*[252!*e] + 907200*[250!*e] + 302400*[249!*e] - 1764000*[248!*e] - 1360800*[246!*e] + 1058400*[244!*e] - 30240*[243!*e] + 604800*[242!*e] - 3255000*[240!*e] + 378000*[238!*e] - 1360800*[236!*e] + 1310400*[234!*e] - 151200*[233!*e] + 630000*[232!*e] + 589680*[231!*e] - 3326400*[230!*e] + 181440*[229!*e] - 7801920*[228!*e] - 100800*[226!*e] - 403200*[225!*e] + 3940020*[224!*e] - 4032000*[222!*e] + 302400*[221!*e] + 2368800*[220!*e] - 453600*[219!*e] + 2116800*[218!*e] - 151200*[217!*e] + 3704400*[216!*e] + 1209600*[215!*e] + 1512000*[214!*e] + 554400*[213!*e] + 1864800*[212!*e] - 6380640*[210!*e] - 604800*[209!*e] - 630000*[208!*e] + 453600*[207!*e] + 60480*[206!*e] + 1058400*[205!*e] + 4944240*[204!*e] - 2479680*[202!*e] + 388080*[201!*e] - 3190320*[200!*e] - 443520*[199!*e] + 9288720*[198!*e] - 1512000*[197!*e] + 12787740*[196!*e] - 6395760*[195!*e] + 2968560*[194!*e] + 1512000*[193!*e] - 1459920*[192!*e] + 16480800*[190!*e] + 302400*[189!*e] - 12474000*[188!*e] + 50400*[187!*e] + 6804000*[186!*e] + 6300000*[185!*e] - 4023600*[184!*e] - 2192400*[183!*e] + 907200*[182!*e] - 1738800*[181!*e] - 11365200*[180!*e] + 604800*[179!*e] + 4939200*[178!*e] + 7963200*[177!*e] - 17829000*[176!*e] - 3144960*[175!*e] - 31903200*[174!*e] - 1844640*[173!*e] + 14454720*[172!*e] - 1144080*[171!*e] - 13960800*[170!*e] - 6693120*[169!*e] - 16702560*[168!*e] - 4898880*[167!*e] - 2504880*[166!*e] - 10251360*[165!*e] + 44336880*[164!*e] + 8991360*[163!*e] + 7902720*[162!*e] - 4989600*[161!*e] - 652680*[160!*e] + 6980400*[159!*e] + 10584000*[158!*e] - 756000*[157!*e] - 18804240*[156!*e] + 604800*[155!*e] + 2721600*[154!*e] + 7106400*[153!*e] - 6010200*[152!*e] + 13003200*[151!*e] + 19933200*[150!*e] + 4208400*[149!*e] + 1189440*[148!*e] - 6287400*[147!*e] - 12398400*[146!*e] + 19908000*[145!*e] + 8211840*[144!*e] - 50400*[143!*e] + 3323040*[142!*e] + 15346800*[141!*e] + 11241720*[140!*e] + 1542240*[139!*e] - 6521760*[138!*e] - 4188240*[137!*e] - 10111920*[136!*e] - 15817440*[135!*e] - 3318840*[134!*e] - 17818920*[133!*e] - 46982880*[132!*e] - 19451160*[131!*e] + 23306640*[130!*e] - 55857120*[129!*e] + 13130250*[128!*e] - 151200*[127!*e] + 47174400*[126!*e] + 6199200*[125!*e] + 27307350*[124!*e] + 36046080$

*[123!*e]-9324000*[122!*e]+44200800*[121!*e]-46720800*[120!*e]-
7975800*[119!*e]-35380800*[118!*e]+16616880*[117!*e]+1398600*[116!*e]-
49896000*[115!*e]-68846400*[114!*e]+50218560*[113!*e]+53411400*[112!*e]-
17886960*[111!*e]+24937920*[110!*e]+22604400*[109!*e]-17287200*[108!*e]-
24998400*[107!*e]+66780000*[106!*e]-66462480*[105!*e]+5594400*[104!*e]-
9480240*[103!*e]+36403920*[102!*e]-38707200*[101!*e]-
21268800*[100!*e]+79309440*[99!*e]+41682060*[98!*e]+48875400*[97!*e]-
3773700*[96!*e]+91551600*[95!*e]-86307480*[94!*e]+11913300*[93!*e]-
7812000*[92!*e]-11037600*[91!*e]-150948000*[90!*e]-5796000*[89!*e]-
77737800*[88!*e]-153165600*[87!*e]+113293320*[86!*e]-
19971000*[85!*e]+51760800*[84!*e]-
39649680*[83!*e]+191421720*[82!*e]+5766600*[81!*e]+12894420*[80!*e]+59170020*
[79!*e]-96069960*[78!*e]+67687200*[77!*e]-
66628800*[76!*e]+80010000*[75!*e]+54647880*[74!*e]-85024800*[73!*e]-
45659880*[72!*e]-60623640*[71!*e]-1169280*[70!*e]-
40017600*[69!*e]+77256900*[68!*e]+102259920*[67!*e]-
7194600*[66!*e]+78441300*[65!*e]+5739573*[64!*e]-79657452*[63!*e]-
146786850*[62!*e]-66729600*[61!*e]-
45418800*[60!*e]+3704400*[59!*e]+61941600*[58!*e]-
8769600*[57!*e]+140156100*[56!*e]-
19051200*[55!*e]+57103200*[54!*e]+14565600*[53!*e]+40849200*[52!*e]-
35721000*[51!*e]-26762400*[50!*e]+40458600*[49!*e]-45758790*[48!*e]-
24835860*[47!*e]-93912000*[46!*e]-
8626800*[45!*e]+31941000*[44!*e]+106495200*[43!*e]-
102979800*[42!*e]+26523000*[41!*e]+1645560*[40!*e]-
135849840*[39!*e]+94460100*[38!*e]+103798800*[37!*e]+87976980*[36!*e]+1210230
0*[35!*e]-70568820*[34!*e]-75754476*[33!*e]-47297355*[32!*e]-
79319100*[31!*e]+16624440*[30!*e]+130977000*[29!*e]+27437130*[28!*e]-
63849240*[27!*e]+34340040*[26!*e]+46592280*[25!*e]-24713640*[24!*e]-
44895060*[23!*e]-15185520*[22!*e]-
34167420*[21!*e]+46530540*[20!*e]+47454750*[19!*e]-9799020*[18!*e]-
20085030*[17!*e]-20206180*[16!*e]-
33584460*[15!*e]+40398750*[14!*e]+32319000*[13!*e]-
41003160*[12!*e]+5386500*[11!*e]+17368320*[10!*e]+2894720*[9!*e]-
16195620*[8!*e]+4342080*[7!*e]-7036200*[6!*e]+7036200*[5!*e]+1026576*[4!*e]-
2053152*[3!*e]+362880*[2!*e])